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D – 4143

Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, January 2018
(2013 Scheme)**

13.803 : COMPUTER COMMUNICATIONS (T)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. What are the different models of network architecture ? Compare.
2. When is connectionless service superior to connection-oriented service ?
3. Explain about guided and unguided media.
4. List two connecting devices used in computer networks.
5. How many host machines can be connected in a class-B network ? Give details.
6. Compare and contrast a switch from a router.
7. What is the need of the error control at the link layer and the transport layer ?
8. What is meant by framing ? Briefly explain.
9. What are the different types of network attacks ?
10. What are the uses of Intrusion Detection Systems ? **(10×2=20 Marks)**

PART – B

Answer **any one** question from **each** Module. **Each** question carries **20** marks.

Module – I

11. Explain in detail the different layers and its function in an OSI model.

OR

12. a) What are the different types of transmission mediums used in data communication systems ? Compare their merits and demerits.
b) Explain how TCP is used to add connection-oriented reliable feature to the service of IP. **(1×20=20 Marks)**

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Module – II

13. a) Calculate the maximum number of class A, B and C network IDs.
b) What's the difference in the subnet mask for a class A address with 16 bits for the subnet ID and a class B address with 8 bits for the subnet ID ?

OR

14. What do you mean by routing protocol ? Explain in detail. (1×20=20 Marks)

Module – III

15. a) Draw and discuss the Ethernet frame format.
b) Briefly explain the cyclic redundancy check error detection scheme. Prove the validity of the scheme.

OR

16. Explain the various services provided by the data link layer to the network layer. (1×20=20 Marks)

Module – IV

17. a) Explain the functions of a packet filter.
b) What is the need of an intrusion detection system in a network that is firewall protected ?

OR

18. a) Describe in brief the common types of attacks to a network.
b) Describe how Simple Three Way Handshake and Third Party authentication protocol ensure authentication. (1×20=20 Marks)
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